

List of Acronyms

AAS	American Astronomical Society
AC	(IVS) Analysis Center
ACU	Antenna Control Unit
ADB	Analog to Digital Board
ADC	Analog to Digital Converter
AEB	Agência Espacial Brasileira (Brazilian Space Agency)
AES	Advanced Engineering Services Co., Ltd (Japan)
AGU	American Geophysical Union
AIPS	Astronomical Image Processing System
ALMA	Atacama Large Millimeter Array
AMRFP	Access to Major Research Facilities Program
APEX	Atacama Pathfinder EXperiment (Chile)
API	Application Programming Interface
APSG	Asia-Pacific Space Geodynamics program
APTF	Asian Pacific Time and Frequency
ARC	Astrometric Radiointerferometric Correlator
ASI	Agenzia Spaziale Italiana (Italy)
ASKAP	Australian Square Kilometre Array Pathfinder (Australia)
ATA	Advanced Technology Attachment
ATM	Asynchronous Transfer Mode
ATNF	Australia Telescope National Facility (Australia)
AUT	Auckland University of Technology (New Zealand)
BADW	Bavarian Academy of Sciences (Germany)
BBC	Base Band Converter
BIPM	Bureau International de Poids et Mesures (France)
BKG	Bundesamt für Kartographie und Geodäsie (Germany)
BPE	Bernese Processing Engine
BPF	Band Pass Filter
BVID	Bordeaux VLBI Image Database
BW	Band Width
BWG	Beam WaveGuide
CARAVAN	Compact Antenna of Radio Astronomy for VLBI Adapted Network (Japan)
CAS	Chinese Academy of Sciences (China)
CAY	Centro Astronómico de Yebes (Spain)
CC	(IVS) Combination Center
CC	(IVS) Coordination Center
CDDIS	Crustal Dynamics Data Information System (USA)
CDP	Crustal Dynamics Project
CGE	Centrum für Geodätische Erdsystemforschung (Germany)
CGS	Centro di Geodesia Spaziale (Italy)
CHAMP	Challenging Mini-Satellite Payload
CIB	Correlator Interface Board

CNES	Centre National d'Etudes Spatiales (France)
CNRS	Centre National de la Recherche Scientifique (France)
CNS	Communication, Navigation and Surveillance systems, Inc. (USA)
COL	Combination at the Observation Level
CONGO	COoperative Network for GIOVE Observation
CORE	Continuous Observations of the Rotation of the Earth
CP	Circularly Polarized
CPO	Celestial Pole Offset
CRAAE	Centro de Rádio Astronomia e Aplicações Espaciais (Brazil)
CRAAM	Centro de Rádio Astronomia e Astrofísica Mackenzie (Brazil)
CrAO	Crimean Astrophysical Observatory (Ukraine)
CRDS	Celestial Reference frame Deep South
CRF	Celestial Reference Frame
CRL	Communications Research Laboratory (now NICT) (Japan)
CSIR	Council for Scientific and Industrial Research (South Africa)
CSIRO	Commonwealth Scientific and Industrial Research Organisation (Australia)
CVN	Chinese VLBI Network
CW	Continuous Wave
DAR	Data Acquisition Rack
DAS	Data Acquisition System
DB	database
DBBC	Digital Base Band Converter
DBE	Digital BackEnd
DDC	Digital DownConverter
DeltaDOR	Delta Differenced One-way Range
DFG	Deutsche Forschungsgemeinschaft (German Research Foundation) (Germany)
DFT	Discrete Fourier Transform
DGFI	Deutsches Geodätisches ForschungsInstitut (Germany)
DGK	Deutsche Geodätische Kommission (Germany)
dGPS	differential GPS
DHC	de Havilland Canada Company
DIIAR	Dipartimento di Ingegneria Idraulica, Ambientale, Infrastrutture viarie, Rilevamento (Italy)
DLR	Deutsches Zentrum für Luft- und Raumfahrt (German Aerospace Center)
DOM	Data Output Module
DOMES	Directory Of MERIT Sites
DORIS	Doppler Orbitography and Radiopositioning Integrated by Satellite
DPFU	Degrees Per Flux Unit
DPN	Dual Pseudo-random Noise
DR	Dichroic Reflector
DRAO	Dominion Radio Astrophysical Observatory (Canada)
DSN	Deep Space Network
DSS	Deep Space Station
D-VLBI	Differential VLBI
ECMWF	European Centre for Medium-Range Weather Forecasts

EDM	Electronic Distance Measurement
EIA	Environmental Impact Assessment
ENVISAT	ENVIronmental SATellite
EOP	Earth Orientation Parameter
ERP	Earth Rotation Parameter
ERS	European Remote Sensing Satellites
ESA	European Space Agency
ESO	European Southern Observatory
ETS-8	Engineering Test Satellite 8
ETS-VIII	Engineering Test Satellite 8
EUREF	EUropean REference Frame
EVGA	European VLBI for Geodesy and Astrometry
EVLA	Expanded Very Large Array
e-VLBI	Electronic VLBI
EVN	European VLBI Network
FACH	Fuerza Aérea de Chile (Air Force of Chile) (Chile)
FCN	Free Core Nutation
FES	Finite Element Solution
FESG	Forschungseinrichtung Satellitengeodäsie/Technical University of Munich (Germany)
FFI	Forsvarets ForskningsInstitutt (Norwegian Defence Research Establishment) (Norway)
FFTS	Fast Fourier Transform Spectrometer
FINEP	Financiadora de Estudos e Projetos (Brazilian Innovation Agency)
FPGA	Field-programmable Gate Array
FS	Field System
FTP	File Transfer Protocol
FWF	Fonds zur Förderung der wissenschaftlichen Forschung (Austrian Science Fund)
GA	Geoscience Australia (Australia)
GAPE	Great Alaska and Pacific Experiment
GARR	Gruppo per l'Armonizzazione delle Reti della Ricerca (Italian Academic and Research Network) (Italy)
GARS	German Antarctic Receiving Station (Germany)
GEMD	Geospatial and Earth Monitoring Division (Australia)
GeoDAF	Geodetic Data Archiving Facility (Italy)
GEX	Giga-bit series VLBI EXperiment
GFZ	GeoForschungsZentrum (Germany)
GGAO	Goddard Geophysical and Astronomical Observatory (USA)
GGN	Global GPS Network
GGOS	Global Geodetic Observing System
GGP	Global Geodynamics Project
GICO	GIga-bit CORrelator
GINS	Géodésie par Intégrations Numériques Simultanées
GIOVE	Galileo In-Orbit Validation Element
GISTM	GPS Ionospheric Scintillation and TEC Monitor

GLONASS	GLObal NAVIGATION Satellite System (Russia)
GLORIA	GLObal Radio Interferometry Analysis
GNS Science	Geological and Nuclear Sciences Research Institute (New Zealand)
GNSS	Global Navigation Satellite Systems
GOCE	Gravity field and steady-state Ocean Circulation Explorer
GOW	Geodetic Observatory Wettzell
GPS	Global Positioning System
GR	General Relativity
GRACE	Gravity Recovery and Climate Experiment (USA)
GRGS	Groupe de Recherches de Géodésie Spatiale (France)
GSD/NRCan	Geodetic Survey Division of Natural Resources Canada (Canada)
GSFC	Goddard Space Flight Center (USA)
GSI	Geospatial Information Authority of Japan (formerly Geographical Survey Institute) (Japan)
GSK	Generalized Spectral Kurtosis
GSOS	GPS Surface Observing System
HartRAO	Hartebeesthoek Radio Astronomy Observatory (South Africa)
HAT-Lab	High Advanced Technology-Lab (Italy)
HEMT	High Electron Mobility Transistor
HF-EOP	High Frequency Earth Orientation Parameters
HIA	Herzberg Institute for Astrophysics (Canada)
HIRLAM	High Resolution Limited Area Model
Honeywell-TSI	Honeywell Technology Solutions Inc. (USA)
HOPS	Haystack Observatory Postprocessing System
HPBW	Half Power Beam Width
HTS	High Temperature Superconductor
HTSI	Honeywell Technology Solutions Incorporated (USA)
HVAC	Heating, Ventilation, and Air Conditioning
IAA	Institute of Applied Astronomy (Russia)
IAG	International Association of Geodesy
IAPG	Institute of Astronomical and Physical Geodesy (Germany)
IAU	International Astronomical Union
IBGE	Instituto Brasileiro de Geografia e Estatística (Brazil)
iBOB	Interconnect Break Out Board
ICRAR	International Centre for Radio Astronomy Research (Australia)
ICRF	International Celestial Reference Frame
ICRF2	2nd Realization of the International Celestial Reference Frame
IDS	International DORIS Service
IDV	IntraDay Variability
IERS	International Earth Rotation and Reference Systems Service
IF	Intermediate Frequency
IGFN	Italian Space Agency GPS Fiducial Network (Italy)
IGG	Institute of Geodesy and Geophysics (Austria)
IGGB	Institut für Geodäsie und Geoinformation der Universität Bonn (Germany)

IGM	Instituto Geográfico Militar (Chile)
IGN	Institut Geographique National (France)
IGN	Instituto Geográfico Nacional (Spain)
IGS	International GNSS Service
I-JUSE	Institute of Japanese Union of Scientists and Engineers (Japan)
IKAROS	Interplanetary Kite-craft Accelerated by Radiation of the Sun (Japan)
ILRS	International Laser Ranging Service
INACH	Institute for Antarctic Research Chile
INAF	Istituto Nazionale di Astrofisica (Italy)
INGV	Institute of Geophysics and Volcanology (Italy)
INPE	Instituto Nacional de Pesquisas Espaciais (Brazil)
InSAR	Interferometric Synthetic Aperture Radar
IP	Internet Protocol
IRA	Istituto di RadioAstronomia (Italy)
IRASR	Institute for Radio Astronomy and Space Research (New Zealand)
IRIS	International Radio Interferometric Surveying
ISACCO	Ionospheric Scintillations Arctic Campaign Coordinated Observation
ISBN	International Standard Book Number
ITRF	International Terrestrial Reference Frame
IUGG	International Union of Geodesy and Geophysics
IVS	International VLBI Service for Geodesy and Astrometry
IYA	International Year of Astronomy
JADE	JApanese Dynamic Earth observation by VLBI
JARE	Japanese Antarctic Research Expedition (Japan)
JAXA	Japan Aerospace Exploration Agency (Japan)
JENAM	Joint European and National Astronomy Meeting
JIVE	Joint Institute for VLBI in Europe
JLRA	Joint Laboratory for Radio Astronomy (China)
JPL	Jet Propulsion Laboratory (USA)
KARAT	KAshima RAy-tracing Tools (Japan)
KAREN	Kiwi Advanced Research and Education Network (New Zealand)
KASI	Korea Astronomy and Space Science Institute (Korea)
KAT	Karoo Array Telescope (South Africa)
KBR	K-Band Ranging
KPGO	Kokee Park Geophysical Observatory (USA)
KSP	KeyStone Project (Japan)
KSRC	Kashima Space Research Center (Japan)
KTU	Karadeniz Technical University (Turkey)
KTU-GEOD	Karadeniz Technical University (KTU), Department of Geomatics Engineering (Turkey)
KVG	Korea VLBI system for Geodesy (Korea)
KVN	Korean VLBI Network
LAB	Laboratoire d'Astrophysique de Bordeaux (France)
LBA	Long Baseline Array (Australia)
LCP	Left Circular Polarization

LEO	Low Earth Orbit
LHC	Left Hand Circular
LINZ	Land Information New Zealand (New Zealand)
LLR	Lunar Laser Ranging
LNA	Low Noise Amplifier
LO	Local Oscillator
LOD	Length Of Day
LPF	Low Pass Filter
LSM	Least Squares Method
MAO	Main Astronomical Observatory (Ukraine)
MARBLE	Multiple Antenna Radio-interferometry for Baseline Length Evaluation
MCB	Monitor and Control Bus
MCI	Monitor and Control Infrastructure
MERIT	Monitoring of Earth Rotation and Intercomparison of the Techniques of Observation and Analysis
MEX	Mars Express
MIT	Massachusetts Institute of Technology (USA)
MLRO	Matera Laser Ranging Observatory (Italy)
MOBLAS	MOBILE LASER Ranging System
MODEST	MODEl and ESTimate
MPI	Max-Planck-Institute (Germany)
MPIfR	Max-Planck-Institute for Radioastronomy (Germany)
MTLRS	Modular Transportable Laser Ranging System
NAO	National Astronomical Observatories (China)
NAOJ	National Astronomical Observatory of Japan (Japan)
NAR	Noise-Adding Radiometer
NASA	National Aeronautics and Space Administration (USA)
NASU	National Academy of Sciences of Ukraine (Ukraine)
NCAR	National Center for Atmospheric Research (USA)
NCEP	National Centers for Environmental Prediction (USA)
NCRIS	National Collaborative Research Infrastructure Strategy (Australia)
NDRE	Norwegian Defence Research Establishment (Norway)
NEOS	National Earth Orientation Service (USA)
NEQ	Normal Equation System
NetCDF	Network Common Data Form
NEXPReS	Novel EXploration Pushing Robust e-VLBI Services
NGII	National Geographic Information Institute (Korea)
NGS	National Geodetic Survey (USA)
NGSLR	Next Generation Satellite Laser Ranging
NICT	National Institute of Information and Communications Technology (Japan)
NII	National Institute of Informatics (Japan)
NIPR	National Institute of Polar Research (Japan)
NMA	Norwegian Mapping Authority (Norway)
NMF	Niell Mapping Function
NNR	No-Net-Rotation

NNT	No-Net-Translation
NOAA	National Oceanic and Atmospheric Administration (USA)
NOFS	U.S. Naval Observatory, Flagstaff Station (USA)
NRAO	National Radio Astronomy Observatory (USA)
NRCan	Natural Resources Canada (Canada)
NRF	National Research Foundation (South Africa)
NSF	National Science Foundation (USA)
NTT	New Technology Telescope (Chile)
NVI	NVI, Inc. (USA)
Ny-SMAC	Ny-Ålesund Science Managers Committee
OAN	Observatorio Astronómico Nacional (Spain)
OCA	Observatoire de la Côte d'Azur (France)
OCARS	Optical Characteristics of Astrometric Radio Sources
OPAR	Observatoire de Paris (France)
OPC	(IVS) Observing Program Committee
OS	Operating System
OSI	Operator Software Impact
OSO	Onsala Space Observatory (Sweden)
PARNASSUS	Processing Application in Reference to NICT's Advanced Set of Softwares Usable for Synchronization
PCB	Printed Circuit Board
PEACESAT	Pan-Pacific Education and Communication Experiments by Satellite
PERSAC	Pulkovo EOP and Reference Systems Analysis Center (Russia)
PFB	Polyphase Filter Bank
PLO	Phase Locked Oscillator
PMD	Politecnico di Milano DIIAR (Italy)
POLARIS	POLar motion Analysis by Radio Interferometric Surveying
POP	Point of Presence
PPP	Precise Point Positioning
PRARE	Precise RAnge and Range-rate Equipment
PSD	Power Spectrum Density
QRFH	Quad Ridge Feed Horn
QZSS	Quasi Zenith Satellite System (Japan)
RAEGE	Red Atlántica de Estaciones Geodinámicas y Espaciales
RAS	Russian Academy of Sciences (Russia)
RCP	Right Circular Polarization
RDBE	Roach Digital Back End
RDV	Research and Development sessions using the VLBA
REFAG	Reference Frames for Applications in Geosciences
RF	Radio Frequency
RFI	Radio Frequency Interference
RHC	Right Hand Circular
ROEN	Rádio-Observatório Espacial do Nordeste (Brazil)
ROM	Real Observatorio de Madrid (Spain)
RRFID	Radio Reference Frame Image Database

RT	Radio Telescope
RTK	Real-Time Kinematic
RTW	Radio Telescope in Wettzell
SAC	Satellite Application Centre
SAI	Sternberg State Astronomical Institute (Russia)
SATA	Serial Advanced Technology Attachment
SBIR	Small Business Innovation Research
SCG	SuperConducting Gravimeter
SDK	Software Development Kit
SEAC	Sociedad Española de Aplicaciones Ciberneticas (Spain)
SEFD	System Equivalent Flux Density
SHAO	SHanghai Astronomical Observatory (China)
SI	Special Issue
SINEX	Solution INdependent EXchange
SK	Spectral Kurtosis
SKA	Square Kilometre Array
SLR	Satellite Laser Ranging
SMHI	Swedish Meteorological and Hydrological Institute (Sweden)
SNAP	Standard Notation for Astronomical Procedures
SNR	Signal to Noise Ratio
SOD	Site Occupation Designator
SPb	Saint-Petersburg (Russia)
SPEED	Short Period and Episodic Earth rotation Determination
SPU	Saint-Petersburg University (Russia)
SPV	Signal Path Variation
SRIF	Square Root Information Filter
SRT	Sardinia Radio Telescope (Italy)
SRTM	Shuttle Radar Topography Mission
SSA	Singular Spectrum Analysis
SSAI	Science Systems and Applications, Inc. (USA)
STEREO	Solar TERrestrial RElations Observatory
TAC	Totally Accurate Clock
TAI	Temps Atomique International (International Atomic Time)
TAL	Terrestrial Air Link
TANAMI	Tracking Active galactic Nuclei with Australia Milliarcsecond Interferometry (Australia)
TanDEM-X	TerraSAR-X add-on for Digital Elevation Measurement (Germany)
TCE	Time Comparison Equipment
TDC	(IVS) Technology Development Center
TEC	Total Electron Content
TEMPO	Time and Earth Motion Precision Observations
TerraSAR-X	Terra Synthetic Aperture Radars X-band (Germany)
TIGO	Transportable Integrated Geodetic Observatory (Germany, Chile)
TLRS	Transportable Laser Ranging System
TRF	Terrestrial Reference Frame

TTW	TWIN-Telescope Wettzell (Germany)
TU	Technische Universität
TUM	Technical University of Munich (Germany)
TWSTFT	Two-Way Satellite Time and Frequency Transfer
UEN	Up East North
UMTS	Universal Mobile Telecommunications System
UNAVCO	University NAVSTAR Consortium
UNICAMP	Universidade Estadual de Campinas (Brazil)
UNITEC-1	UNIsec Technological Experiment Carrier-1 (Japan)
URSI	Union Radio-Scientifique Internationale
USB	Unified S-Band
USB	Upper Side Band
USNO	United States Naval Observatory (USA)
USP	Universidade de São Paulo
UT	Universal Time
UT1	Universal Time
UTAS	University of TASmania (Australia)
UTC	Coordinated Universal Time
u-VLBI	Ultra High Sensitivity VLBI
V2PEG	VLBI2010 Project Executive Group
VC	Video Converter
VDIF	VLBI Data Interchange Format
VERA	VLBI Exploration of Radio Astrometry
VEX	VLBI EXchange format
VHDL	Very High-level Design Language
VieVS	Vienna VLBI Software
VLBA	Very Long Baseline Array (USA)
VLBI	Very Long Baseline Interferometry
VMF	Vienna Mapping Function
VSI	VLBI Standard Interface
VSI-C	Metsähovi VSI-H Converter board
VSI-H	VLBI Standard Interface Hardware
VSI-S	VLBI Standard Interface Software
VSOP	VLBI Space Observatory Program
VSR	VLBI Science Recorder
VSSP	Versatile Scientific Sampling Processor
VTP	VLBI Transport Protocol
VTRF	VLBI Terrestrial Reference Frame
WACO	WAshington CORrelator (USA)
WEGENER	Working Group of European Geoscientists for the Establishment of Networks for Earth-science Research
WG	Working Group
WVR	Water Vapor Radiometer
WVSR	Wideband VLBI Science Recorder
WWW	World Wide Web

XDM	eXperimental Development Model
ZTD	Zenith Total Delay
ZWD	Zenith Wet Delay